



South Coast Air Quality Management District

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California Energy Commission

DOCKETED
12-AFC-02

TN # 69687

FEB. 26 2013

February 19, 2013

Stephen O'Kane
Vice President, AES Southland
690 N. Studebaker Road
Long Beach, CA 90803

Subject: Huntington Beach Energy Project, (Facility ID# 115389)
Request for Additional Clarifying Information

Dear Mr. O'Kane:

South Coast Air Quality Management District (AQMD) staff is currently evaluating the permit applications for your proposed Huntington Beach Energy Project (HBEP). Before our evaluation can be completed and the Preliminary Determination of Compliance (PDOC) be finalized, the AQMD must ensure that your proposed project complies with all applicable federal, state, and local air quality regulations.

As you are aware, since the original completeness review of your applications were conducted, the AQMD's Greenhouse Gas (GHG) Prevention of Significant Deterioration (PSD) Rule 1714 was approved into the State Implementation Plan (SIP) and became effective on January 9, 2013. This SIP approval provided AQMD the authority for issuance of PSD permits to GHG sources located within the AQMD. Prior to this date, AQMD was not the permitting authority and therefore was not required to evaluate your proposed HBEP for compliance with the GHG PSD requirements. In addition, EPA recently provided several comments on the GHG PSD requirements for another proposed repowering project with a similar design configuration on January 25, 2013, a copy of which letter was already provided to you. In addition, some further clarifying information related to operation, modeling and health risk assessment, emissions and scheduling is required. As a result, the following additional clarifying information is needed so that the AQMD can make the compliance determination with GHG PSD requirements for your proposed project:

Carbon Capture and Storage (CCS)

The cost estimate you provided for implementing Carbon Capture and Storage (CCS) for the HBEP was based on a "Capacity Factor Method" and cost prorating. Please provide a more detailed cost breakdown estimate of the technology for each aspect of CCS, as it relates to the HBEP, including the following:

1. Capture and Compression (include sorbent, physical, and chemical adsorption)
2. Transport
3. Storage (include geological for both oil fields and deep saline aquifers, and ocean sequestration)

Please also provide the cost breakdown in the following categories 1) Material, 2) Equipment, 3) Installation, 4) Engineering, 5) Construction, and 6) Annual Operating Costs.

In addition, the calculation that was performed and submitted which estimated the GHG emissions from the HBEP to be 1,082 lbsCO₂e/MWH did not use the net power output or the total hours of operation for which you have requested the plant to be permitted to operate. Please revise this calculation to be based on the total requested annual hours of operation of the plant (6,835 hrs/yr), the net power output, and include all combustion related GHG pollutants.

Performance Standard for GHGs

EPA has issued GHG PSD permits for a number of power plant projects with a CO₂ emission level of less than 1,000 lbs/MWHgross. In addition, EPA has proposed 40CFR 60 subpart TTTT - New Source Performance Standard for Greenhouse Gas Emissions which would apply to electric utility generating units. This regulation would set forth a CO₂ emission limit of 1,000 lbs/MWHgross, which is expected to be promulgated in the next few months. Your project as currently proposed emits more than 1,000 lbs CO₂/MWH gross. Please provide the AQMD with detailed information demonstrating how you plan to comply with the applicable performance standards for GHG.

Start Up

Please provide a step-by-step process description for the cold start-up of the combustion turbine, combustion turbine generator, heat recovery steam generator, and steam turbine generator. Include the time required from initial start until the steam turbine begins generating power, the time required to reach the load at which the DLN combustors become effective, and the time until ammonia injection begins. Include a discussion of the key design changes from a conventional combined cycle system that allows for the rapid start process. Also please provide the fuel use and power output during the cold, warm, and hot start up periods, as well as the shutdown period.

Past Actual Emissions Data

Please provide the past 5 years of actual emissions data for Redondo Beach Units 6 and 8, up to and including 2012. Also please provide 2012 past actual emission data for Huntington Beach Units 1 and 2.

Modeling

After an initial review, AQMD modeling staff determined that both the PSD and criteria pollutant modeling performed for the project was inadequate. Our modeling staff has been in contact with the HBEP consultants to inform them of the deficiencies and request corrections. We are currently waiting for the revised modeling to be completed.

Other GHG Emission Sources

If there will be any circuit breakers or any equipment using sulfur hexafluoride (SF₆) at the plant, please estimate emissions from those sources of SF₆.

Oil/Water Separator

If there will be a new oil/water separator at the plant which is not exempt under Rule 219(p)(16), please submit a permit application.

Construction Schedule

AQMD construction permits are valid for 1 year. Additionally, 40 CFR § 52.21(r) requires that construction commence within 18 months of the permit being issued. This is to insure that projects are reviewed under the most current regulations and considering the latest control technology. The construction schedule as outlined in Table 2.2-1 shows the start of construction for Block 1 as the 1st quarter 2015. The construction for Block 2 is scheduled to begin in the 1st quarter 2018. The

construction timeline you have proposed for Block 1 will most likely fall outside the 1 year window for AQMD permits and may even fall outside the 18 month PSD requirement. The Block 2 construction schedule is well outside these limits. Please be aware that AQMD permits can be extended but only in cases where construction has begun and there are extenuating circumstances requiring an extension.

Shutdown Schedule

Please indicate the proposed timing for the shutdown of HB Boilers 1 and 2 and RB Boilers 6 and 8, and the methods that will be used to render these units permanently non-operational. As previously requested, please provide a detailed decommissioning plan for each of these units.

Commissioning

Please provide an estimate of the quantity of fuel used during each phase of the commissioning period.

Combustor Tuning Activities

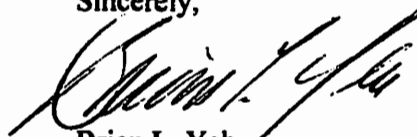
Please provide details regarding the periodic combustor tuning activities proposed for the new turbines. Include the estimated emissions, the frequency, and the duration of these events.

Health Risk Assessment (HRA)

The emission factors used in the HRA are based on AP-42, except for formaldehyde which is based on an assumed concentration of 120 ppb. This is less than the AP-42 factor for this pollutant. There is no justification for the use of the 120 ppb concentration other than it would keep the facility below the major source threshold for NESHAP. Please either provide valid justification for the use of this factor, or revise the calculation to reflect the AP-42 factor.

Please provide the requested information within thirty (30) days of the date of this letter. If you have any questions regarding this letter please contact Mr. John Yee at (909) 396-2531 or Mr. Chris Perri at (909) 396-2696.

Sincerely,



Brian L. Yeh
Senior Manager
Mechanical, Chemical, and Public Services Team
Engineering & Compliance

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Cc: Mohsen Nazemi
Felicia Miller, CEC



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**APPLICATION FOR CERTIFICATION FOR THE
HUNTINGTON BEACH ENERGY PROJECT**

Docket No. 12-AFC-02

**PROOF OF SERVICE
(Revised 02/19/2013)**

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***After docketing, the Docket Unit will
provide a copy to the persons listed
below. Do not send copies of
documents to these persons unless
specifically directed to do so.***

ANDREW McALLISTER
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DECLARATION OF SERVICE

I, Diane L. Scott, declare that on February 26, 2013, I served and filed copies of the attached **South Coast Air Quality Management District Request for Additional Clarifying Information on the Huntington Beach Energy Project (12-AFC-02)**, dated February 19, 2013. This document is accompanied by the most recent Proof of Service, which I copied from the web page for this project at:

http://www.energy.ca.gov/sitingcases/huntington_beach_energy/index.html.

The document has been sent to the other parties on the Service List above in the following manner:

(Check one)

For service to all other parties and filing with the Docket Unit at the Energy Commission:

 X I e-mailed the document to all e-mail addresses on the Service List above and personally delivered it or deposited it in the US mail with first class postage to those parties noted above as "hard copy required"; **OR**

 Instead of e-mailing the document, I personally delivered it or deposited it in the US mail with first class postage to all of the persons on the Service List for whom a mailing address is given.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am over the age of 18 years.

Dated: February 26, 2013



Diane L. Scott, *Project Assistant*
Siting, Transmission and Environmental Protection Division